

WHAT IS CLAIMED IS:

1. In a vacuum refining unit wherein a vacuum pump connected via a suction line creates a vacuum above a glass melt to be refined, and wherein a valve for supplying secondary air from an atmosphere for maintaining constant pressure conditions in the vacuum unit branches off the suction line, the improvement comprising:

detecting an absolute pressure in the vacuum unit (10) with a pressure sensor (11);

operating the vacuum pump (20) with an operating vacuum exceeding a maximum absolute pressure; and

regulating as a function of a detected absolute pressure in the vacuum unit (10) and a preset value of an absolute pressure the valve, designed as a control valve (15) and which branches off the suction line (16), the absolute pressure in the vacuum unit (10) to the preset value by an appropriate supply of secondary air.

2. In a vacuum refining unit wherein, a vacuum pump connected via a suction line creates a vacuum above a glass melt to be refined, and wherein a valve for supplying secondary air from an atmosphere for maintaining constant pressure conditions in the vacuum unit branches off the suction line, the improvement comprising:

detecting a pressure differential between an absolute pressure in the vacuum refining unit (10) and an atmospheric pressure with a pressure sensor (11.1);

operating the vacuum pump (20) at an operating vacuum exceeding a maximum pressure differential; and

regulating as a function of a detected pressure differential and a preset value for a pressure differential the valve, designed as a control valve (15) and which branches off the suction line (16), the pressure differential to the preset value by an appropriate supply of secondary air.

3. In a vacuum refining unit wherein a vacuum pump connected via a suction line creates a vacuum above a glass melt to be refined, and wherein a valve for supplying secondary air from an atmosphere for maintaining constant pressure conditions in the vacuum unit branches off the suction line, the improvement comprising:

detecting a glass level in the vacuum refining unit (10) with a glass level sensor (11.2);

operating the vacuum pump (20) at an operational vacuum associated with a maximum glass level; and

regulating as a function of a detected glass level and a preset value of the glass level, the valve, designed as a regulating valve (15) and which branches off the suction line (16), the glass level to the preset value by an appropriate addition of secondary air.

4. In the vacuum refining unit in accordance with claim 3, wherein one of the detected absolute pressure, the pressure differential and the glass level is supplied to a measuring transducer (12) having an electrical output signal supplied to an electrical regulator (13) of the control valve (15) as a regulating signal.

5. In the vacuum refining unit in accordance with claim 4, wherein the vacuum refining unit is employed in a chemical refining process.

6. In the vacuum refining unit in accordance with claim 5, wherein the vacuum refining unit is employed in a physical refining process.

7. In the vacuum refining unit in accordance with claim 1, wherein one of the detected absolute pressure, a pressure differential and a glass level is supplied to a measuring transducer (12) having an electrical output signal supplied to an electrical regulator (13) of the control valve (15) as a regulating signal.

8. In the vacuum refining unit in accordance with claim 7, wherein the vacuum refining unit is employed in a chemical refining process.

9. In the vacuum refining unit in accordance with claim 7, wherein the vacuum refining unit is employed in a physical refining process.

10. In the vacuum refining unit in accordance with claim 2, wherein one of a detected absolute pressure, the pressure differential and the glass level is supplied to a measuring transducer (12) having an electrical output signal supplied to an electrical regulator (13) of the control valve (15) as a regulating signal.

11. In the vacuum refining unit in accordance with claim 10, wherein the vacuum refining unit is employed in a chemical refining process.

12. In the vacuum refining unit in accordance with claim 10, wherein the vacuum refining unit is employed in a physical refining process.